# HIMARS forward basing/aircraft tethering concepts

*By Col. Joe Russo*

Over the past 17 years, the Marine Corps has routinely operated at ranges in excess of 600-800 miles and beyond from the littorals. Concurrently, the decrease in available amphibious shipping has created gaps which have been partially mitigated by the creation of Special Purpose Marine Air-Ground Task Forces as well as split/disaggregated Marine Expeditionary Unit formations. In doing so, gaps in fire support capabilities have emerged.

The M142 HIMARS is a C-130/C-17 deployable, all-weather, persistent fire support platform capable of delivering precision Fires in excess of 300 kilometers with the Army Tactical Missile System, or in excess of 84 kilometers with the Guided Multiple Launch Rocket System (GMLRS). Ongoing munitions developments will soon generate significantly greater ranges and capabilities. Given the ranges of munitions both available and emergent, HIMARS, while not always optimal, is capable of supporting company landing teams/special operations forces/vertical assault elements operating in a distributed manner, while providing the advantage of being able to offset the delivery platform. While developments in maritime/amphibious-based GMLRS Fires offer a degree of flexibility to the force in support of niche requirements, they likewise produce significant challenges to mobility, range and ammunition/logistical management. The air transported HIMARS option enables flexible precision Fires to forces operating at distances/depth on the battlefield - beyond the current reach of sea based platforms — or beyond the limits/capabilities of combatant command-based tactical aircraft.

If positioned on a rotational basis in the European Command area of responsibility (AOR), a HIMARS platoon supported by C-130 aircraft or equivalents is capable of responding to the requirements of Special Purpose Marine Air-Ground Task Force – Crisis Response, transiting Marine Expeditionary Units, or of participating in steady state theater security cooperation/joint exercises throughout EUCOM and U.S. Africa Command. Note: the Unit Deployment Program of 5th Battalion, 11th Marines HIMARS to Okinawa in the spring of 2016 has established a similar, forward deployed HIMARS capability to III Marine Expeditionary Force/Pacific Command, enabling rapid employment and further development of coastal defense/maritime long-range precision munition initiatives in the PACOM AOR. This concept may be further enhanced by the forward staging of HIMARS support equipment and munitions. (Example: U.S. European Command/Marine Corps Prepositioning Program-Norway). While there are few scenarios in which battalion sized formations of HIMARS are

*Marines from K Battery, 2nd Battalion, 14th Marine Regiment, reassemble an M142 High Mobility Artillery Rocket System (HIMARS) after being transported on an Air Force MC-130, at Dugway Proving Grounds, Utah, March 30, 2018. Marines from Kilo Battery flew from Fort Campbell, Ky., to Dugway where they offloaded and fired four HIMARS missiles, demonstrating a unique capability that will give commanders more options to deal with threats when other options are not appropriate. (Lance Cpl. Niles Lee/U.S. Marine Corps)*

*Marines assigned to 2nd Battalion, 14th Marine Regiment, launch a rocket from a High Mobility Artillery Rocket System during their mission rehearsal exercise. (Sgt. Ray Lewis/U.S. Marine Corps)*

optimally employed, it is in proximity to those particular geographic scenarios that the pre-staging of HIMARS support equipment is optimal, reducing the time and lift requirements necessary to support the logistical/sustainment requirements of HIMARS Fires in support of high end conventional operations. HIMARS, when desired, can additionally provide a very visible signature and demonstration of commitment to allies/NATO partners.

HIMARS platoons within both the U.S. Army and Marine Corps have demonstrated a proven capability to conduct raid/airlift delivered operations in conjunction with supporting C-130/C-17 aircraft, and effect command and control with narrowband and broadband satellite communications, and high frequency voice and digital communications. A total of three batteries (nine HIMARS platoons of three x two launchers per battery) are organic to the 14th Marine Regiment. A total of four batteries are organic to 11th Marines, and additional HIMARS structure/capabilities are envisioned. Recent maturation of HIMARS employment tactics, techniques and procedures, and rapid innovations in long-range, surface-to-surface precision munitions, including seeker warhead capabilities have created relevant opportunities for the operational integration of the M142 HIMARS.

## HIMARS sustainment/aircraft-airfield tethering concepts

Among the most critical factors when planning for the employment of HIMARS, is a recognition of the capabilities and limitations of the M142 Launcher Module (LM) and chassis, and facilitation of the ability to conduct rapid resupply of the MLRS Family of Munitions (MFOM) are paramount. HIMARS employment requires both staff and commander to give serious consideration to both how a HIMARS unit will be introduced into theater, and most notably, how it will be resupplied, particularly during phases of operation in which munition expenditures are expected to be high.

Planning considerations:

- While exercise planning often theoretically includes the movement and offload of HIMARS units and ammunition via amphibious shipping, it must be noted that the RSSs of a HIMARS battalion alone consume a significant portion of available deck space on an LPD-17. Furthermore, storage space and special handling requirements of MFOM (missile pods) make the throughput of ship-to-shore movement challenging. The

unique materiel handling equipment requirements of GMLRS munitions make the external sling loading of MFOM pods by rotatory wing aircraft challenging. Damage, which may occur during transit and offloading, causes the pods to become unserviceable.

- The Family of Medium Tactical Vehicles chassis, of great expeditionary value because of its ability to be internally loaded into a C-130, is conversely over-burdened by the LM, and highly susceptible to dead-lining chassis damage when operated aggressively off-road.
- Finally, the expected high volume of ammunition expenditure of HIMARS MFOM in a distributed operating environment, and at the high end of the range of military operations will necessitate a speed and complexity of ammunition resupply which is not common to artillery administrative and logistics operations centers, or Marine Logistics Group capabilities. Arguably, unless stockpiled, expenditure rates of MFOM will necessitate the execution of GMLRS resupply actions before the first rockets/missiles are fired.

With each of the above noted factors in mind, and considering the emergent range capabilities of the M142, the most operationally supportable/flexible means of initial introduction, employment and sustainment of HIMARS are arguably in conjunction with aircraft movements and airfield tethering. The ability to operate from existing strategic lift capable airfields/runways facilitates the employment of HIMARS, maximizes the range of its munitions at stand-off ranges, preserves the sustainability/survivability of the M142 chassis, and most notably facilitates timely resupply of MFOM.

The Marine Corps Operating Concept and Marine Corps Force 2025 each challenge the service to innovate to meet the needs of a dynamic, 21st Century battlefield. Status quo however, will not suffice, and the importance of developing innovative solutions to these significant service-level challenges is paramount.

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